

International Storage and Disposal Facilities - Considerations in the IAEA Context

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1. IAEA Statute and Joint Convention

The IAEA statute points out, the Agency shall seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world.

The Joint Convention reaffirms that the ultimate responsibility for ensuring the safety of spent fuel and radioactive waste management rests with the State but affirms the importance of international co-operation in enhancing the safety of spent fuel and radioactive waste management.

Modes of Action in the IAEA

- Consensus Building
- Capacity Building
- Problem Solving
- Information Exchange

2. International/Multinational Approach

There is a different approach in the different Member States. There are three groups:

- only a few Member States have officially high interest in the advantages of a international/multinational solution as for example Switzerland
- there is a big group of Member States seeing multinational co-operation in this field only as an option
- a third group of Member States is strictly against the discussion of international or multinational solutions and co-operation at this point of time like Finland, France and Sweden. They think, it is not the right time for this discussion as they have their own programme already in an advanced stage. They see this discussion as a thread for their programme.

Having this in mind, it is very difficult for the Agency to take a clear position, as we have to represent all our Member States.

3. Potential solution for countries with small nuclear programmes

The question can be raised as to whether developing a strictly “national” approach is reasonable in the case of countries with a small nuclear power programme or only research reactors producing small amount of spent fuel and waste. This is even more the case for countries with radiation sources only and no nuclear facilities. This “national” approach may lead in those countries to inappropriate use of already scarce resources which, otherwise,

could be used for different, equally important, social or economic purposes. In this respect, the concepts of “multinational” or “regional” spent fuel storage facilities and waste repositories would appear to make good sense. Several Member States of the International Atomic Energy Agency (IAEA) and part of the waste management community have already expressed their interest in such options.

However, such concepts involve political and public acceptance issues and therefore a consensus among countries or within regions eventually concerned by the development of a multinational storage or a multinational repository is a prerequisite for their realisation.

A potential solution could be, one country with a repository for spent fuel and high level waste could take the lead and accept the waste and radiation sources from other countries , even from a whole continent.

In this context it was deemed appropriate the IAEA identifies and assesses the important factors to be taken into account in the process of such consensus building.

4. Factors for Consideration

- Ethical aspects
- Legal and institutional aspects
- Safety aspects
- Environmental issues
- Technical issues
- Economic issues
- Particular concerns
- Safeguards issues
- Public acceptance

5. Conclusions and Outlook

The concepts for developing multinational facilities for spent fuel storage or waste disposal can present interesting advantages to countries with small amount of produced spent fuel or waste. There are many benefits in a regional solution like the obvious economies of scale achievable with multinational facilities. It is also clear that storing spent fuel in a few safe, reliable and secure facilities will facilitate safeguards and physical security and reduce the risk of proliferation, especially for highly enriched uranium fuel from research and test reactors.

Once a country or a group of countries is sufficiently interested in the concept of a multinational storage or disposal they must begin the task of investigating how to implement the concept.

However, one should be aware of the many political and public acceptance issues that may arise in opposition to a regional solution. Successful implementation of long term storage and disposal programmes on the national level, increased transparency in spent fuel and waste management programmes and non proliferation issues, and finally demonstrated broad adherence to international instruments such as the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management could significantly

contribute to the acceptance of the international concepts of regional spent fuel facilities and radioactive waste repositories.